



3485 Pacheco Boulevard
Martinez, CA 94553

VIA UPS

December 15, 2021

Bay Area Air Quality Management District
ATTN: Mail Stop FM1
375 Beale Street, Suite 600
San Francisco, CA 94105

To Whom It May Concern:

Subject: October 25, 2021 Reportable Flaring Event Incident Report -Public Version

Pursuant to Regulation 12 Rule 12 Section 406, Martinez Refining Company submits the following information regarding a reportable flaring event as defined in Regulation 12-12-208 that occurred on October 25, 2021. The attached report is the public version and discusses the cause of the flaring event and any prevention measures considered to prevent recurrence of the event.

If you have any questions concerning the information, please contact Rick Shih at (925) 313-3743 or richard.shih@pbfenergy.com.

Sincerely,

A handwritten signature in black ink, appearing to be "GJ", with a long horizontal line extending to the right.

Gordon Johnson
Manager, Environmental Affairs
Martinez Refining Company

Attachment

Regulation 12 Rule 12 Reportable Flaring Event Causal Analysis Report

1. **Report Date:** December 15, 2021
2. **Refinery Name and Site Number:** Martinez Refining Company - BAAQMD Site # A0011
3. **Refinery Contact and Phone Number:** Rick Shih (925) 313-0586
4. **Flare Identification:** LOP flare S-1471
5. **Flaring Event Duration:**
 - a. **Date:** October 25, 2021
 - b. **Time:** 6:57 am to 11:35 pm
 - c. **Total Duration of Event:** approximately 16.5 hours
6. **Brief Description of Flaring Event:** Flaring at LOP flare when a compressor [REDACTED] tripped off, resulting in greater than 1 MMSCF of gas being flared in a 24-hour period.
7. **Process Flow Diagram:** see attached process flow diagram
8. **Volume of Gas Flared:** 1.2 MMSCF
9. **Total Emissions due to flaring based on Regulation 12 Rule 11 Methodology:**
 - a. 558 lbs of methane
 - b. 239 lbs of non-methane hydrocarbons
 - c. 388 lbs of sulfur dioxide
10. **Was the Gas Scrubbed?** The vent gas that went to the flare was not scrubbed.
11. **Primary Cause of Flaring Event including Detailed Description of the Cause and Contributing Factors:**

The LOP flare is an elevated, steam-assisted flare with nitrogen purge to prevent air intrusion. The LOP Flare system is comprised of collection headers, liquid knockout vessels, two flare vapor recovery compressors, piping to route recovered gas to fuel gas treaters, a water seal vessel, the flare header, and the flare stack.

On October 24, 2021, one of the flare vapor recovery compressors [REDACTED] tripped off due to low oil flow to the compressor. Since the second compressor [REDACTED] was functioning, there was no flaring at the time. However, on October 25, 2021, the second compressor tripped off due to low oil flow, which resulted in flaring. The low oil flow was found to be caused by a failure of an electric motor. The electric motor was rushed out for repairs. Following procedures, actions were taken to minimize vent gas being sent to the flare. When the motor was repaired and returned to the site (before the end of the day), the motor was installed, [REDACTED] was restarted, and then flaring stopped.

It was determined that water from the recent heaving rains and had gotten into the motor and likely caused the motor failure.

12. Immediate Corrective Actions Taken:

Investigated cause of flaring, which was found to be a failed electric motor. The failed electric motor was rushed out for repairs. In parallel, procedures were followed to minimize the amount of vent gas

being sent to the flare. When the motor was repaired and returned to the site, the motor was installed, [REDACTED] was restarted, and flaring stopped.

13. Was the Flaring the Result of an Emergency?

Regulation 12 Rule 12 defines “Emergency” as “a condition at a petroleum refinery beyond the reasonable control of the owner or operator requiring immediate corrective action to restore normal and safe operation that is caused by a sudden, infrequent and not reasonably preventable equipment failure, natural disaster, act of war or terrorism or external power curtailment, excluding power curtailment due to an interruptible power service agreement from a utility.” The flaring was the result of an electric motor failing, caused by rainwater intrusion into the equipment. This was an emergency caused by a “sudden, infrequent and not reasonably preventable equipment failure.”

14. Was the Flaring Consistent with an Approved FMP?

Yes, the flaring was consistent with Martinez Refining Company approved Flare Management Plan (FMP). As stated on page 3-1 of the FMP, Martinez Refining Company believes the key to flare minimization is careful planning to avoid flaring coupled with evaluation of any flaring events that occur and incorporation of lessons learned back into the planning process to further reduce flaring. As part of the FMP, Martinez Refining Company developed procedures to implement this process. As stated on page 3-1 of the FMP, “when these procedures are followed, any flaring is consistent with the FMP.” Operations followed procedure C(F)-20 – Unanticipated Flaring. This procedure addresses flare events caused by process upsets or unplanned events.

15. Was the Flaring due to a Regulatory Mandate to Vent to a Flare?

The flaring was not due to a regulatory mandate to vent to the flare.

16. Prevention Measures Considered to Minimize Flaring from this Type of Flaring Event

The following preventative measures have been considered to minimize flaring from this type of event:

- Have a spare motor and gear box in the inventory to minimize the length of repairs and flaring.
- Installed new seals on motor.